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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,570	02/24/2000	Edward W. Conrad	(BU999-152)	5806

7590 12/31/2003
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EXAMINER

LU, TOM Y

ART UNIT PAPER NUMBER

2621

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/512,570

Applicant(s)

CONRAD ET AL.

Examiner

Tom Y Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9-12 and 14-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9-12 and 14-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Upon entry of Request of Continued Examination filed on October 27, 2003, the rejection of claims 1-2, 4-7, 9-12 and 14-21 under Nakano reference (U.S. Patent No. 5,487,116) has been withdrawn. However, new references have been inserted in the following non-final Office Action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 4-7, 8-12, 14-15, 17, 19 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kannon et al (U.S. Patent No. 6,181,839 B1).

a. Referring to Claim 1, Kannon discloses obtaining intensity vs. pixel information (Kannon at column 9, line 22, teaches using an area sensor 9 to obtain gradient information of L-letter pattern 21) along a plurality of scans extending in different directions (Kannon discloses performing scans in longitudinal and lateral directions for detecting edge points, column 10, lines 56-57), through substantially the same point (see the same point F in figure 14), in the vicinity of an edge of the image shape (in the vicinity of an edge of the L-letter shape); recognizing scans with sufficient contrast as containing edge information (see column 11, lines 28-29); subjecting the recognized scans to an edge detection

algorithm (see figure 7, step 2); detecting the edge location of the image by using said edge detection algorithm (see figure 10); and generating a locus of points that define the two-dimensional shape of the image from the detected edge values (see figures 15, 22 and 25B).

- b. Referring to Claim 2, Kannon discloses wherein the edge detection algorithm is a user defined edge detection algorithm that is tailored to the application (the edge detection process is a stand alone step, and the parameters can be user defined).
- c. Referring to Claim 4, Kannon discloses wherein the obtaining step includes the step of obtain intensity vs. pixel information in at least four directions (column 10, lines 56-57)
- d. Referring to Claim 5, Kannon discloses wherein one of said direction is normal to the approximate edge location (see figures 11A, 15 and 22).
- e. With regard to Claim 6, all limitations are addressed in Claim 1,
- f. With regard to Claim 7, see explanation in Claim 2.
- g. With regard to Claim 9, see explanation in Claim 4.
- h. With regard to Claim 10, see explanation in Claim 5.
- i. With regard to Claim 11, the only difference between Claim 11 and Claim 1 is Claim 11 calls for a program storage device readable by machine, which Kannon in figure 6 shows host computer 13, which inherently contains a program storage.
- j. With regard to Claim 12, see explanation in Claim 2.
- k. With regard to Claim 14, see explanation in Claim 4.
- l. With regard to Claim 15, see explanation in Claim 5.

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- m. Referring to Claim 17, Kannon discloses wherein the plurality of direction are angularly spaced apart about 45 degrees (column 10, lines 56-57, see figures 11A and 15).
- n. With regard to Claim 19, see explanation in Claim 17.
- o. With regard to Claim 21, see explanation in Claim 17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 16, 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kannon. All the arguments and applicability in Claim 1, 6, and 11 are incorporated herein.

- a. Referring to Claim 16, Kannan does not explicitly state the plurality of directions are angularly spaced apart about 22 ½ degrees. However Kannan at column 10, lines 56-57 teaches performing scanning in longitudinal and lateral direction, which may not be exactly 22 ½ degrees. However, such measurement is merely a design choice, which does not alter the scope of invention. The examiner takes official notice herein.
- b. With regard to Claim 18, see explanation in Claim 16.
- c. With regard to Claim 20, see explanation in Claim 16.

Conclusion

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4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

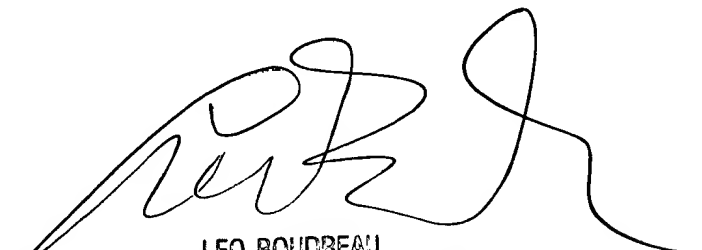
- a. Kannon et al, U.S. Patent No. 6,081,627 see figures 11A-15.
- b. Sakakibara et al, U.S. Patent No. 5,461,478, see figures 4-6.
- c. Hasegawa et al, U.S. Patent No. 5,097,329, see figure 8.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Y Lu whose telephone number is (703) 306-4057. The examiner can normally be reached on 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Tom Y. Lu



LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600